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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,568	12/12/2003	Satoshi Kojima	03500.017762.	8616
5514 7590 12/20/2006 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER DOTE, JANIS L	
			ART UNIT 1756	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
2 MONTHS		12/20/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

8

<b>Office Action Summary</b>	Application No. 10/733,568	Applicant(s) KOJIMA ET AL.	
	Examiner Janis L. Dote	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.  
 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-11,13-19 and 21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 1-3,5-11, 13-19, and 21 is/are allowed.  
 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/31/06</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1756

1. The examiner acknowledges the cancellation of claims 4, 12, and 20, and the amendments to claims 1, 6, 8, and 9 set forth in the amendment filed on Jul. 31, 2006. Claims 1-3, 5-11, 13-19, and 21 are pending.

The examiner notes that the "Amendment to the specification" section filed on Oct. 12, 2006, has been entered.

2. The "Amendment to the specification" section filed on Jul. 31, 2006, did not comply with 37 CFR 1.121 for the reasons discussed in the Notice of non-compliant amendment mailed on Sep. 27, 2006. Accordingly, that "Amendment to the specification" section has not been entered.

3. The reference US 6,391,394 listed on the form PTO-1449 filed on Jul. 31, 2006, has been crossed-out by the examiner because it is already listed on the form PTO-1449 filed on Mar. 16, 2005. A copy of the examiner-initialed form PTO-1449 was attached to the office action mailed on May 15, 2006.

4. The replacement drawing sheets filed on Jul. 31, 2006, are not acceptable because they did not address all of the objections to Fig. 2 set forth in the office action mailed on May 15, 2006, paragraph 2. The replacement drawing sheet of

Art Unit: 1756

Fig. 2 includes the reference characters **204** and **205**, which are not mentioned in the description.

5. The objection to the specification set forth in the office action mailed on May 15, 2006, paragraph 4, item (2), has been withdrawn in response to the amendments to claims 6 and 8 filed on Jul. 31, 2006.

The objection to the specification set forth in the office action mailed on May 15, 2006, paragraph 4, item (3), with respect to claim 20, has been mooted by the cancellation of claim 20 set forth in the amendment filed on Jul. 31, 2006.

The rejection of claim 20 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on May 15, 2006, paragraph 6, has been mooted by the cancellation of claim 20 set forth in the amendment filed on Jul. 31, 2006.

The rejection of claims 1, 3, 5-10, and 17 under 35 U.S.C. 102(e)/35 U.S.C. 103(a) over US 7,033,721 B2 (Hashizume'721), set forth in the office action mailed on May 15, 2006, paragraph 9, has been withdrawn in response to the amendments to claims 1 and 9 filed on Jul. 31, 2006. The amendment to claim 1 adds the limitation of now-cancelled claim 4 that the layer regions in the photoconductive layer each have a layer thickness of from 3  $\mu\text{m}$  to 15  $\mu\text{m}$ . The amendment to

Art Unit: 1756

claim 9 adds the limitation of now-cancelled claim 12 that the operation for stopping protuberances from growing at the surface of the layer region (A) and forming a layer region (B) on the layer region (A) "is carried out while the thickness of each photoconductive layer region comes to be 3  $\mu\text{m}$  or more to 15  $\mu\text{m}$  or less from the support side." As discussed in paragraph 9, Hashizume'721 teaches an electrophotographic photosensitive member comprising an amorphous silicon photoconductive layer and an intermediate layer that comprises amorphous material having amorphous silicon as its base, where the projecting portions of spherical protrusions in the photoconductive layer have been flattened prior to the formation of the intermediate layer on the photoconductive layer. Example B-4 at col. 40. The photoconductive layer and the intermediate layer have thicknesses of 30 and 0.5  $\mu\text{m}$ , respectively. The layer thicknesses of both layers are outside the layer thickness range of 3 to 15  $\mu\text{m}$  recited in instant claims 1 and 9. Hashizume'721 does not teach or suggest that the photoconductive layer and the intermediate layer both have layer thicknesses as recited in the instant claims.

The rejection of claims 1, 3, 5-7, 9, and 17 are rejected under 35 U.S.C. 102(b)/35 U.S.C. 103(a) over US 5,512,510 (Murayama), as evidenced by applicants' admissions I, set forth

Art Unit: 1756

in the office action mailed on May 15, 2006, paragraph 10, has been withdrawn in response to the amendments to claims 1 and 9 filed on Jul. 31, 2006, described supra. As discussed in paragraph 10, Murayama teaches an electrophotographic photosensitive member comprising a photoconductive layer that comprises a second photoconductive layer, i.e., layer region (A), and a first photoconductive layer, i.e., layer region (B). The first and second photoconductive layers comprise an amorphous material having silicon atoms as its base. See example 3 at col. 15 and Table 2 at col. 17. For the reasons discussed in paragraph 10, it is reasonable to presume that the "protuberances" on the surface of the second photoconductive layer, i.e., layer region (A), in the resultant photosensitive member disclosed by Murayama are stopped from growing at the surface of said layer. However, the Murayama first and second photoconductive layers have thicknesses of 25 and 3  $\mu\text{m}$ , respectively. The 25  $\mu\text{m}$  layer is outside the layer thickness range of 3 to 15  $\mu\text{m}$  recited in instant claims 1 and 9. Murayama does not teach or suggest that the first photoconductive layer has a layer thickness as recited in the instant claims.

Art Unit: 1756

6. This application is in condition for allowance except for the following formal matters set forth infra.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

In Fig. 2, the reference characters **201**, **204**, and **205**. See the instant specification, page 4.

In Fig. 5, the reference characters **5113**, **5114**, **5116**, **5117**, **5118**, **5119**, **5120**, and **5123**. See the instant specification, pages 33-38.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Art Unit: 1756

8. The drawings are also objected to because

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See the instant specification, page 4, lines 11-14, which identifies the drawing as "an example of protuberances in a conventional electrophotographic photosensitive member." See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. Applicants' arguments filed on Jul. 31, 2006, as applicable to the objections to the drawings set forth in paragraphs 7 and 8 above, have been fully considered but they are not persuasive.

Applicants assert that the replacement drawing sheets filed on Jul. 31, 2006, overcome the drawing objections. However, for the reasons discussed in paragraph 4, the replacement drawing sheets were found to be unacceptable, and therefore were not entered. Accordingly, the objections to the drawings set forth in paragraphs 7 and 8 stand.



Art Unit: 1756

10. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

(1) In claim 5, the recitation, "layer regions are present in a number of 2 to 6 in the layer thickness direction," lacks antecedent basis in the specification.

(2) The entire recitations in claims 10, 19, and 21 lack antecedent basis in the specification.

Applicants' arguments filed on Jul. 31, 2006, have been fully considered but they are not persuasive.

(1) Applicants assert that the specification provides antecedent basis for the limitation recited in instant claim 5 at page 57, lines 9-10, which discloses that the reactors should optimally be changed between 1 to 5 times.

The disclosure at page 57, lines 9-10, refers to a particular method of making a photoconductive layer. Instant claim 5 is drawn to a photosensitive member, not to a method of making a photoconductive layer.

(2) Applicants assert that claim 10 is supported by the disclosure at page 86, line 33, to page 87, line 8, of the specification, which states that "the following steps are carried out . . . a step of taking out of the reactor the

Art Unit: 1756

cylindrical support on which a photoconductive layer region has been deposited to move it to a different reactor."

However, claim 10 merely recites "taking out of a reaction chamber the support on which a layer region of said photoconductive layer has been formed." Claim 10 does not recite that the support is taken out "to move it to a different reactor" as disclosed in the instant specification. The step recited in claim 10 is broader than the described step.

Applicants further assert that the limitations recited in claims 19 and 21 are supported by the example 12, including Tables 26 and 27 of the instant specification, starting on page 79, line 20, and ending on page 81, line 35.

However, the disclosure in the instant specification is directed to a particular method comprising the step of heating a photoconductive layer formed on a conductive substrate at 300°C for 120 minutes. Instant claim 19 recites that a previously deposited photoconductive layer region "has been subjected to heat treatment at a support temperature higher than that for the photoconductive layer region deposited previously." The limitation recited in claim 19 is broader than the described heat treatment.

37 CFR 1.75(d)(1) states that the "terms and phrases used in the claims must find clear support or antecedent basis in the

Art Unit: 1756

description so that the meaning of the terms in the claims may be ascertainable by reference to the description" (emphasis added).

Applicants are reminded that to overcome the objections they merely have to amend the specification by incorporating the objected claim language of originally filed claim 5, 10, 19, and 21, in the appropriate location.

11. Claims 1-3, 5-11, 13-19, and 21 are allowable over the prior art of record for the reasons discussed in paragraph 5 above.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Application/Control Number: 10/733,568

Page 11

Art Unit: 1756

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLD

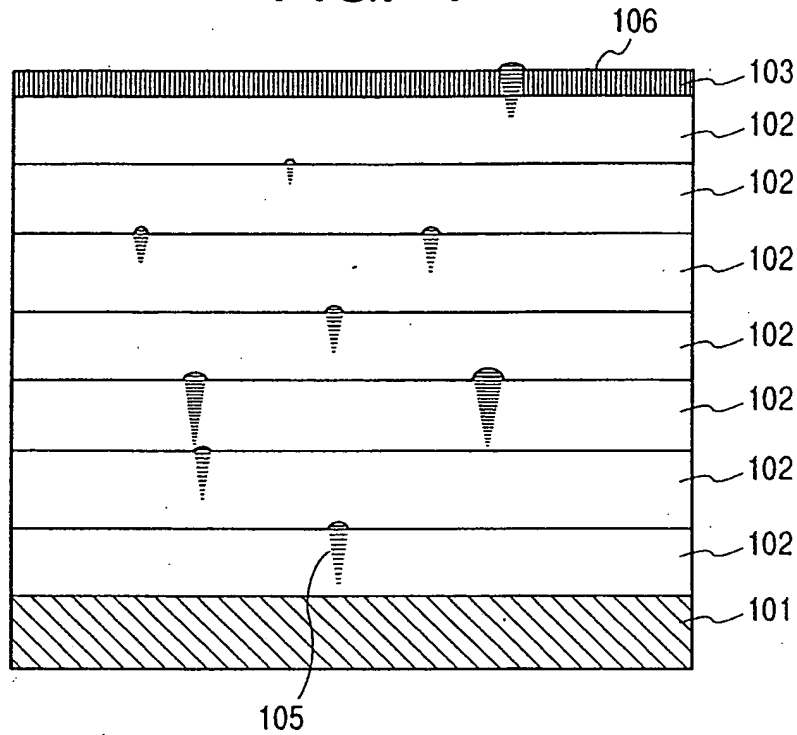
Dec. 14, 2005

*Janis L. Dote*  
**JANIS L. DOTE**  
**PRIMARY EXAMINER**  
**GROUP 1500**  
**1700**

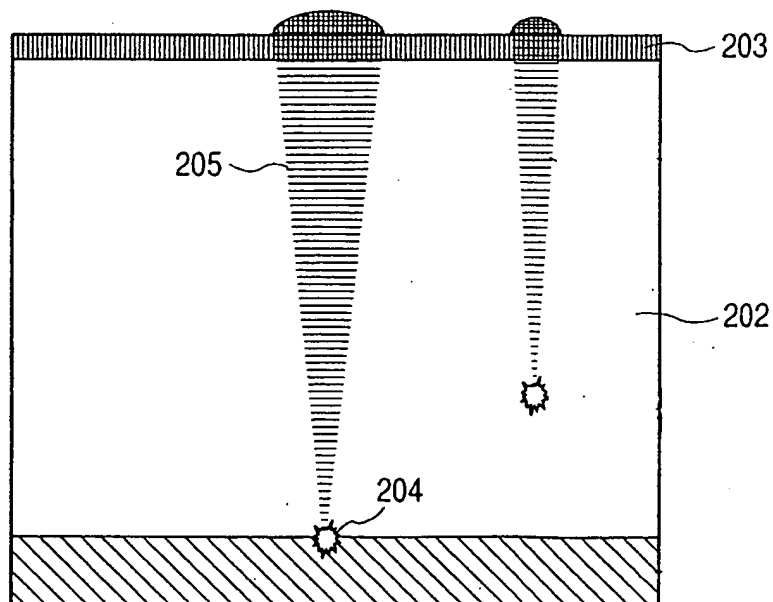
# REPLACEMENT SHEET

1/6

## FIG. 1



## FIG. 2 PRIOR ART



DO NOT  
ENTER BOTH  
REPLACEMENT SHEETS  
NOT ACCEPTABLE  
D. D. D.  
12/14/06